Please read before using this equipment.

Partner 1680X Chess Computer

InterTAN WARRANTY

InterTAN warrants that this product will be free from defects in materials and workmanship for a period of ninety (90) days from the date of purchase. Within this period, simply take the product and your proof of purchase to any InterTAN store or dealer and the product will be repaired without charge for parts and labour. InterTAN reserves the right to charge for transportation. Any product which has been subject to misuse or accidental damage is excluded from this warranty.

This warranty is only applicable to a product purchased through InterTAN's company owned stores and dealers and to a product that is presented for repair in a country where InterTAN offers the product for sale. While this warranty does not confer any legal rights other than those set out above, you may have additional statutory rights which will vary under the laws of the various countries, states, provinces and other governmental entities in which InterTAN operates. This warranty is subject to all statutory rights you may have in the country of purchase.

WE SERVICE WHAT WE SELL

7A5

FEATURES

Your GO Partner 1680X Chess Computer is a relentless and versatile chess opponent. Easy to set up and play, it can teach you proven strategies and tactics used by grandmasters.

Important:

- All our games and toys are made in accordance with the European safety regulations, attested by the label "CE" fixed on the box.

- Not suitable for children under 3 years of age as the toy is electrical in nature.

- Keep this owner's manual so that you can trace back to the importer whenever necessary.

Its features include:

Special Sensory Playing Surface – lets the computer sense a move when you press a piece against a square.

LCD Display – shows current move, piece position and verification, level, position set up, coaching, and study position information.

Rank and File Board Lights – let you easily see where a piece came from and where it should go during a move.

Sixty-Four Play Levels – give you 64 levels of difficulty, including regular play, beginner, mate search, coach, and fun levels.

Take Back – lets you take back and replay moves.

Rule Enforcement – prevents illegal moves.

Save – lets you turn off the computer without interrupting the game in progress so you can continue playing later.

Move – lets you force the computer's move, ask the computer to suggest your next move, change sides with the computer, or learn by watching the computer play against itself.

Problem Setup – lets you set up special chess problems.

Opening Book Memory – contains most major opening strategies to let the computer respond more rapidly during a game's opening moves.

Position Verification – shows you the current position of the pieces in case you accidentally knock over the pieces.

Coach Function – evaluates your opening strategy and warns you when your pieces are threatened.

Evaluation – shows the computer's evaluation of the current game.

Display Move – allows you to see the search depth and move that the computer is currently considering.

Non-Automatic Mode – allows you to play against another person with the computer as a referee, enter a series of moves, or replay a game to a certain position.

Eight Built-In Study Positions – let you improve your chess knowledge with the computer's help.

Two Power Options – let you power the computer from batteries or from household AC power with an optional AC adapter.

We recommend that you read these instructions thoroughly and carefully before using your GO Partner 1680X Chess Computer.

Note to Canadian customers: This digital apparatus does not exceed the class B limits for radio noise emissions from digital apparatus.

CONTENTS

PREPARATION

INSTALLING/REPLACING BATTERIES

Your chess computer uses 4 AA batteries (not included). We recommend using alkaline batteries only and never use rechargeable battery.

Note: Any batteries purchased for use in this toy may pose a hazard to children. Please check safety notice supplied with batteries before use.
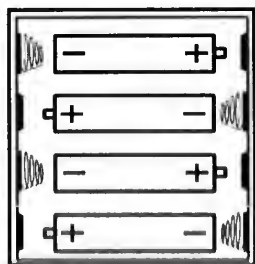
1. Switch I/O to O.

2. Press down on the battery compartment cover's arrow, then slide the cover in the direction of the arrow.

3. Lift and remove the cover.

4. If necessary, remove and discard the old batteries.

5. Insert 4 AA batteries as indicated by the polarity symbols (+ and –) inside the compartment.

   Caution: Batteries installed incorrectly might leak and damage the computer.

6. Replace the cover.

Cautions:

- Use only fresh batteries of the required size and type.

- NEVER leave dead or weak batteries in the computer.

- If the computer will not be used for several days, and you do not want to save a game, remove the batteries.

- Do not mix old and new batteries.

- Never mix alkaline battery with other type of batteries.

- Dispose of batteries properly; do not bury or burn them.

If the computer does not function properly, replace the batteries. If it continues to function improperly, you may need to reset the computer. See "Resetting the Game."

USING AN OPTIONAL AC ADAPTER

With an optional AC adapter, you can operate the computer from household AC power.

Note: To save game information, you must install batteries in the computer even if you are using an optional AC adapter.

Cautions:

- You must use an AC adapter that supplies 9 volts and delivers at least 100 milliamps. Its center tip must be set to negative, and its plug must correctly fit the **9VDC/100mA** jack on the back of the computer. Using an adapter that does not meet these specifications could seriously damage the computer or the adapter.

- Turn off the computer by switching I/O to O before you plug or unplug the AC adapter or its barrel plug.

- Unplug the AC adapter from the AC outlet before you unplug its barrel plug from the computer.

Follow these steps to use an AC adapter.

AC Adapter
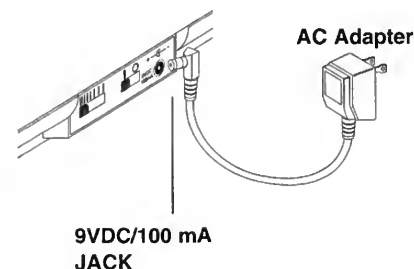
9VDC/100 mA JACK

1. Switch I/O to O.

2. Insert the AC adapter's barrel plug into the 9VDC/100mA jack on the back of the computer.

3. Plug the AC adapter into a standard AC outlet.

RESETTING THE GAME

If your computer does not work properly after you replace the batteries, you might need to reset it. Insert a pointed object such as a straightened paper clip into the **ACL** hole on the bottom of the computer for about 2 seconds.
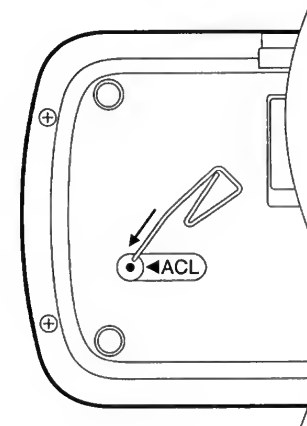
THE GAME BOARD

Following International chess notation, the game board is made up of 8 vertical rows called files, and 8 horizontal rows called ranks. Each file (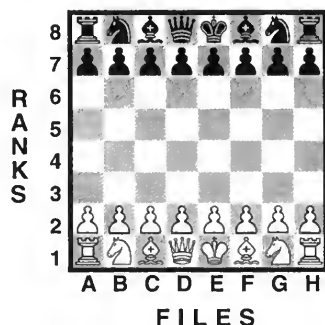left to right) is designated by a file board light and a letter of the alphabet (A through H), and consists of 8 squares alternately colored dark gray and silver. Each rank (bottom to top) is designated by a rank board light and a number (1 through 8), and also consists of 8 squares alternately colored dark gray and silver.

Note: The silver and dark gray squares on the game board are referred to throughout this manual as "white" and "black" respectively.

THE GAME PIECES

Description

There are 16 light gray and 16 brown pieces, 32 in all. Each color has these pieces:

- **1 KING**
- **1 QUEEN**
- **2 BISHOPS**
- **2 KNIGHTS**
- **2 ROOKS**
- **8 PAWNS**

Note: The light gray and brown pieces are referred to as "white" and "black" respectively throughout this manual.

Setting Up

Here's how to set up the game board.

Set the board in front of you so the display and buttons are to the right. Set up the white pieces on the side of the board closest to you this way:
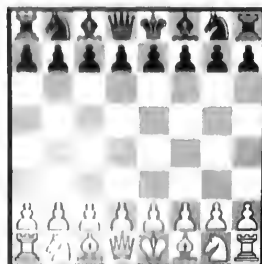
- Place the rooks on A1 and H1
- Place the knights on B1 and G1
- Place the bishops on C1 and F1
- Place the queen on D1
- Place the king on E1
- Place a pawn on each square A2 - H2

Set up the black pieces on the opposite side of the board this way:

- Place the rooks on A8 and H8
- Place the knights on B8 and G8
- Place the bishops on C8 and F8
- Place the queen on D8
- Place the king on E8
- Place a pawn on each square A7 - H7

Note: The queen always begins on a square of her own color.

MOVEMENT

Each kind of piece moves in a different way.

The rook can move any number of squares vertically or horizontally, but it cannot move past a square occupied by another piece.
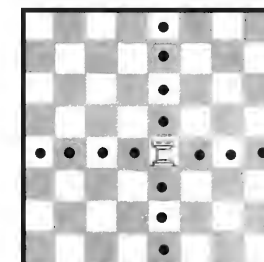
The knight moves in an L-shaped pattern. It moves 2 squares horizontally or vertically, then moves 1 additional square at a right angle from its first move. At the end of its move, the knight must land on a square of a different color than the one it started from.
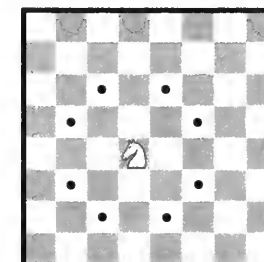
The knight can move even if the squares it moves through are occupied. The knight is the only piece that can "jump" another piece.

8

9

The bishop can move any number of squares diagonally, but it cannot move past a square occupied by another piece.
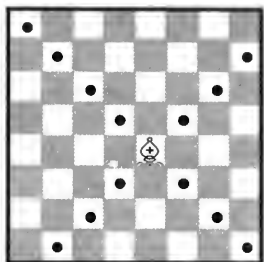
The queen can move any number of squares vertically, horizontally, or diagonally. (The queen's moves are a combination of the rook's and bishop's moves.) The queen cannot move past a square occupied by another piece.
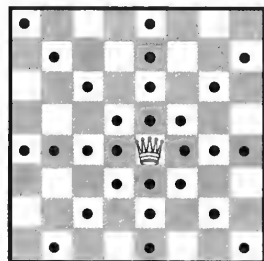
The king can move only 1 square vertically, horizontally, or diagonally.
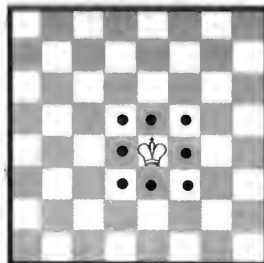
The pawn can move only 1 square directly forward, except when capturing another piece. It captures a piece by moving diagonally forward 1 square, except when capturing en passant (see "Capturing En Passant"). When it moves from its original position, it can move 1 or 2 squares forward. On subsequent moves, it can only move 1 square.
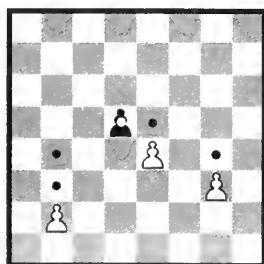
A pawn can be promoted to a piece of higher rank. See "Promoting a Pawn."

GAME RULES

Checkmate — The Object of the Game

The object of the game is to position your pieces so your next move would capture the opponent's king, and your opponent cannot move, protect the king, or capture your piece. This is called checkmate.

Check

Check occurs when a player's piece directly threatens to capture the opponent's king, but the opponent can move the king, or another piece, to escape capture.

Capturing

To capture a piece, you move your piece into the square occupied by the piece you are capturing, except when capturing an opponent's pawn en passant (see "Capturing En Passant"). Remove the captured piece from the board.

Capturing En Passant

A pawn can capture an opponent's pawn which has just moved 2 squares from its original position.

Here's an example of an en passant capture.
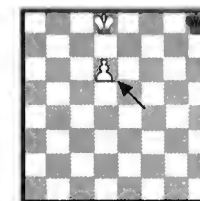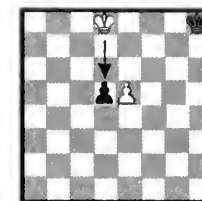
1. The white pawn advances from E4 to E5. The black pawn is still in its original position (D7).

2. The black pawn advances from D7 to D5.

3. The white pawn advances to D6 (one square behind the black pawn's position). The black pawn is captured, even though the exact square it is on was not occupied by the black pawn.

PROMOTING A PAWN

When a pawn crosses the entire board, it may be promoted to a queen or another piece, even if the queen or other piece is still on the board.

CASTLING

Castling protects the king from a potential check or checkmate situation by hiding it behind a fortified position.

You may castle if all of the following conditions exist:

- The king has not moved from his original position.

- The rook which you want to move by castling has not moved from its original position.

- The king is not placed in check on its current square, the square to which it is going, or the square it passes over.

- The squares between the king and the rook are not occupied.

In castling, the king moves 2 squares in the direction of either rook. The rook which is closest to the king after the king has moved now moves to the square right next to and on the other side of the king. Castling counts as 1 move.

Queen side castling

King side castling
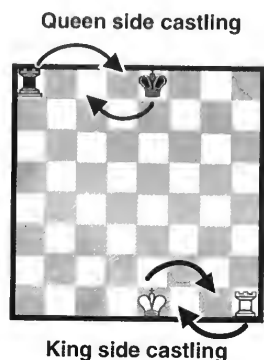
DRAW GAMES

In a draw, neither opponent can win or lose without making an illegal move. There are 3 different types of draws.

- Stalemate
- 50-move rule
- 3-time repetition

Draw by Stalemate: If the king cannot move anywhere without being placed in check (see "Illegal Moves"), the king is not in check, and no other piece on the board can move, a draw by stalemate must be claimed.

Draw by the 50-Move Rule: If 50 consecutive moves are played in a game where neither side moves a pawn or captures a piece, a draw by the 50-move rule must be claimed.

Draw by 3-Time Repetition: If a piece returns to the same location on the board three times, a draw by 3-time repetition must be claimed.

Note: your computer recognizes an immediate 3 - time repetition.

TURNING THE GAME BOARD ON OR OFF
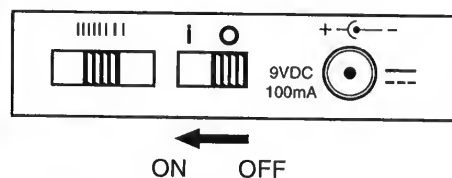
Switch I/O to I to turn on the game board for a new game or to return to a saved game. Switch I/O to O to save the game and turn off the computer. The computer stores all game positions and any next-move calculations it was computing.

Notes:

- To save game information, you must install batteries in the computer even if you are using an optional AC adapter. For information about installing batteries, see "Installing/Replacing Batteries."

- If the computer was calculating a move when you turned it off, but had not yet completed its calculations, it resumes its calculations when you turn it back on.

TURNING THE SOUND ON OR OFF

The computer's sound is normally on. To turn the computer's sound off, press **COACH LEVEL** until the computer beeps once. Then the file board light next to **H** (SILENT) lights for about 2 seconds. To turn the sound back on, press **COACH LEVEL** until the computer beeps twice.

Then the file board light next to **G** (NORMAL) lights for about 2 seconds.
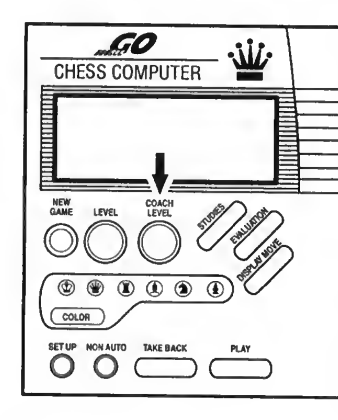
Notes:

- You can turn the computer's sound on or off any time during a game.

- If you turn the computer's sound off, it does not beep even when you make an illegal move.

STORING/REMOVING GAME PIECES
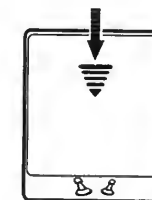
1. Press down on the piece storage compartment cover's arrow, then slide the cover in the direction of the arrow.

2. Lift and remove the cover.

3. Remove or replace the pieces in the compartment.

4. Replace the cover.

ADJUSTING THE DISPLAY CONTRAST

Switch I/O to I, then slide IIIII on the back of the computer to the left or right to adjust the LCD display's contrast.
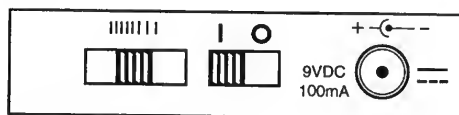
STARTING A NEW GAME

Press **NEW GAME** to start a new game and erase any game stored in memory.

Note: The computer always starts a new game with you playing white pieces and the opponent playing black pieces.

PLAY LEVELS

When you play against the computer, you can select a level that matches your skill.

There are 64 different play levels. These include:

- 8 beginner levels (A1, L-b1 through A8, L-b8)

- 5 fun levels (B1, L-F1 through B5, L-F5)

- 1 indefinite response time level (B6, L-In)

- 1 problem level (B7, L-CF)

- 1 mate finder level (B8, L-Fi)

- 8 practical levels (C1, L-P1 through C8, L-P8)

- 8 brute force levels (D1, L-t1 through D8, L-t8)

- 8 fixed depth search levels (E1, L-d1 through E8, L-d8)

- 8 passive levels (F1, L-c1 through F8, L-c8)

- 8 aggressive levels (G1, L-a1 through G8, L-a8)

- 8 normal play levels (H1, L-n1 through H8, L-n8)

The computer uses the rank/file board lights to display the current level. It also displays a code on the LCD display that corresponds to the current level.

For example, if you choose level B2, the rank/file board lights indicate square B2, and the display shows **L-F2**. See "Displayed Level Codes."

After you install batteries or press **ACL** to reset the computer, it resets itself to level H4. After that, the computer remains on the last selected level.

Displayed Level Codes

	A	B	C	D	E	F	G	H
8	L-b8	L-Fi	L-P8	L-t8	L-d8	L-c8	L-a8	L-n8
7	L-b7	L-CF	L-P7	L-t7	L-d7	L-c7	L-a7	L-n7
6	L-b6	L-In	L-P6	L-t6	L-d6	L-c6	L-a6	L-n6
5	L-b5	L-F5	L-P5	L-t5	L-d5	L-c5	L-a5	L-n5
4	L-b4	L-F4	L-P4	L-t4	L-d4	L-c4	L-a4	L-n4
3	L-b3	L-F3	L-P3	L-t3	L-d3	L-c3	L-a3	L-n3
2	L-b2	L-F2	L-P2	L-t2	L-d2	L-c2	L-a2	L-n2
1	L-b1	L-F1	L-P1	L-t1	L-d1	L-c1	L-a1	L-n1

Viewing the Current Level

To view the current level, press **LEVEL** once. The computer beeps, the rank/file board lights indicate the level, and the display shows the code that corresponds to the level. Then pressing **LEVEL** again to exit level mode.

Changing the Level

You can change the level during your turn during a game.

1. Press **LEVEL**. The computer beeps, the rank/file board lights show the current level, and the level's code appears on the display.

2. Press the square on the game board that corresponds to the level you want (see "Choosing a Level"). The rank/file board lights and the display change to show the level you selected.

3. Press **LEVEL** again.

CHOOSING A LEVEL

If you are a beginner, start out with the beginner levels (A1 through A8) or fun levels (B1 through B5). The computer purposely makes mistakes on these levels so you can beat the computer and learn while you play.

If you are an intermediate or advanced player, try the higher levels.

Note: When you set the level, keep in mind that when the computer has more time to think about its moves, it plays better.

Beginner Levels (A1 through A8)

The eight beginner levels let beginning and average players play (and win) more easily than other levels. The computer makes common mistakes such as leaving pieces unprotected, failing to capture unprotected pieces, and capturing pieces while leaving the king unprotected.

To select any of these levels, press **LEVEL**, press square A1-A8, then press **LEVEL** again.

Notes:

- The computer's opening book memory contains many major opening strategies so the computer can respond more rapidly during a game's opening moves. The computer does not use its opening book memory to compute moves in the beginner levels and fun levels.

- Level A1 is the easiest, and the computer's playing strength increases gradually up through Level A8.

The following table shows:

- The square you press to select the level (after you press **LEVEL**).

- The average amount of time the computer takes to determine its move at that level

Square	Time Per Move
A1	1 Second
A2	2 Seconds
A3	3 Seconds
A4	4 Seconds
A5	5 Seconds
A6	6 Seconds
A7	7 Seconds
A8	8 Seconds

Fun Levels (B1 through B5)

The five fun levels are designed especially for beginners. Like in the beginner levels, the computer makes common mistakes at these levels, such as capturing an opponent's pawn by sacrificing its own higher-value piece. To select any of these levels, press **LEVEL**, press square B1-B5, then press **LEVEL** again.

At the lower fun levels, the computer moves almost instantaneously, not allowing itself to study a move in any depth.

Note: Level B1 is the easiest, and the computer's playing strength increases gradually up through Level B5.

The following table shows:

- The square you press to select the level (after you press **LEVEL**)

- Information about how the computer plays at the level

Square	Information
B1	Computer might sacrifice its own higher-value piece 100 percent of the time
B2	Computer might sacrifice its own higher-value piece 75 percent of the time
B3	Computer might sacrifice its own higher-value piece 50 percent of the time
B4	Computer might sacrifice its own higher-value piece 25 percent of the time
B5	Computer ignores obvious mate-in-1-move

Indefinite Response Time Level (B6)

At the indefinite response time level, the computer searches for one move that will checkmate an opponent or has searched all possible moves (up to 8 ply). Use this level to have the computer analyze complicated positions for hours or even days.

To select this level, press **LEVEL**, press square **B6**, then press **LEVEL** again.

If the computer finds such a move, the rank/file board lights show the move. Otherwise, it continues to analyze the current game without making another move until it finds one. (or exhausts the batteries!)

To stop the search and force the computer to make a move, press **PLAY**. The computer displays the best move it found, and play continues.

Problem Level (B7)

At the problem level, the computer searches for one move that will capture an opponent's piece worth more than 2 points.

Note: The computer assigns point values to the following pieces:

- Pawn (1 point)
- Bishop (3 points)
- Knight (3 points)
- Rook (5 points)
- Queen (9 points)

To select this level, press **LEVEL**, press square **B7**, then press **LEVEL** again.

If the computer finds such a move, the rank/file board lights show the move.

If the computer finds such a series of moves, the rank/file board lights show

the first move in the series. If the computer cannot find such a series of moves, it sounds an error beep. Then you must change levels and press **PLAY** to return to normal play.

Mate Finder Level (B8)

The mate finder level lets you set up a position (see "Problem Setup") and let the computer try to checkmate the opponent's king within 1 to 4 moves, regardless of the opponent's defense.

To select this level, press **LEVEL**, press square B8, then press **LEVEL** again.

If the computer finds such a move, the rank/file board lights show the move.

The computer sounds an error beep if any of the following occur.

- No checkmate is possible

- The computer cannot find a checkmate

- You press the **PLAY** button while the computer is searching for a solution

If an error beep sounds, you must change levels to return to normal play.

Practical Levels (C1 through C8)

At the practical levels, the computer attempts to capture the opponent's pieces and place the opponent's king in check as often as possible. However, the computer sometimes overlooks traps set by an opponent, and sometimes positions its pieces so an opponent can easily attack them.

To select any of these levels, press **LEVEL**, press square C1-C8, then press **LEVEL** again.

The following table shows:

- The square you press to select the level (after you press **LEVEL**)

- The average amount of time the computer takes to determine its move

Square	Time Per Move
C1	1 Second
C2	2 Seconds
C3	5 Seconds
C4	10 Seconds
C5	30 Seconds
C6	1 Minute
C7	2 Minutes
C8	3 Minutes

Brute Force Levels (D1 through D8)

The computer normally limits its search to moves most likely to be successful.

However, at the brute force levels, the computer checks every move possibility during play.

To select any of these levels, press **LEVEL**, press square D1-D8, then press **LEVEL** again.

The following table shows:

- The square you press to select the level (after you press **LEVEL**)

- The average amount of time the computer takes to determine its move

Square	Time Per Move
D1	1 Second
D2	2 Seconds
D3	5 Seconds
D4	10 Seconds
D5	30 Seconds
D6	1 Minute
D7	2 Minutes
D8	3 Minutes

Fixed Depth Search Levels (E1 through E8)

At the fixed depth levels, the computer's search depth is limited by the level you choose. The level number indicates the number of ply (one of your moves or one of the computer's moves) the computer will look ahead to find a move.

For example, if you set the computer to fixed depth search level E1, the computer searches ahead only one move, so it will often overlook a checkmate in two moves. This gives beginners and average players a better chance to win.

To select any of these levels, press **LEVEL**, press square E1-E8, then press **LEVEL** again.

The following table shows:

- The square you press to select the level (after you press **LEVEL**)

- The number of ply the computer will search ahead to find a move

Square	Ply
E1	1
E2	2
E3	3
E4	4
E5	5
E6	6
E7	7
E8	8

Passive Levels (F1 through F8)

The computer normally chooses opening moves that follow active openings and open positions. However, you can set the computer so it can choose moves that follow more passive and closed strategies.

For example, if you set the computer to a passive level, the computer will avoid attacks and keep closed positions, and often will exchange pieces unreasonably, such as its rook for an opponent's pawn. This results in weaker play.

To select any of these levels, press **LEVEL**, press square F1-F8, then press **LEVEL** again.

The following table shows:

- The square you press to select the level (after you press **LEVEL**)

- The average amount of time the computer takes to determine its move

Square	Time per Move
F1	1 Second
F2	2 Seconds
F3	5 Seconds
F4	10 Seconds
F5	30 Seconds
F6	1 Minute
F7	2 Minutes
F8	3 Minutes

Aggressive Levels (G1 through G8)

If you set the computer to the aggressive levels, it will avoid exchanging pieces so it can present more potential attacks to an opponent (to keep the game complicated). It will also check and attack an opponent's pieces in an aggressive manner. This results in stronger play.

To select any of these levels, press **LEVEL**, press square G1-G8, then press **LEVEL** again.

The following table shows:

- The square you press to select the level (after you press **LEVEL**)

- The average amount of time the computer takes to determine its move

Square	Time per Move
G1	1 Second
G2	2 Seconds
G3	5 Seconds
G4	10 Seconds
G5	30 Seconds
G6	1 Minute
G7	2 Minutes
G8	3 Minutes

Normal Play Levels (H1 through H8)

The 8 normal play levels provide the most challenging and difficult play. These levels increase in difficulty from level H1 (the easiest) to level H8 (the most difficult).

To select any of these levels, press **LEVEL**, press square H1-H8, then press **LEVEL** again.

The following table shows:

- The square you press to select the level (after you press **LEVEL**)

- The average amount of time the computer takes to determine its move

Square	Time per Move
H1	1 Second
H2	2 Seconds
H3	5 Seconds
H4	10 Seconds
H5	30 Seconds
H6	1 Minute
H7	2 Minutes
H8	3 Minutes

Note: The time-per-move figure is the average amount of time the computer takes to make each move. During the opening moves of a game, the computer might move more quickly.

ENTERING MOVES

Playing chess against the computer is like playing with a human opponent – you make your move, and the computer responds with its move. The only difference is that you must physically move both your and the computer's pieces. To make a move, press down gently on the center of the FROM, then the TO squares. The FROM square is the current location of the piece you plan to move; the TO square is where you are moving the piece to.

Note: On the LCD display, ☖ - - indicates it is white's turn to move, while ♟ - - indicates that it is black's turn to move.

Note: Once you press a piece (either yours or the computer's) down on a FROM square, you must complete the move by pressing a TO square before you can press the **COLOR**, **DISPLAY MOVE**, **SETUP**, or **EVALUATION** keys. If you try to use any of these keys before you complete the move, the computer sounds an error beep.

Follow these steps to enter moves.

1. When it is your turn to move, press down the piece you want to move on the FROM square. The display shows the piece you pressed and the FROM square, and the rank/file board lights show the FROM square.

2. Press the piece gently down on the TO square where you want to move the piece. ♟ displays with a number. The number changes while the computer plans its move.

   Notes:

   - The computer might respond instantly, so you might not see ♟ and a number.

   - During the computer's turn, the number displayed next to ♟ might change. This is because the computer has changed its mind about its line of play and is searching down another line.

- Occasionally the computer will make a move even though the number does not count down to 0.

- If you do not wish to wait for the computer to calculate its move, press **PLAY** once to force the computer to make a move.

3. When the computer is ready to move, the display shows the piece the computer wants to move and the TO square. The rank/file board lights show the FROM square.

   Note: If the computer's move captures any of your pieces, the black piece's symbol and **X** appear on the display.

4. Press the computer's piece down on the FROM square. The display again shows the piece the computer wants to move and the TO square, and the rank/file board lights show the TO square.

5. Press the computer's piece gently down on the TO square. The display shows ♟ _ _ to indicate it is your turn to move.

Here's an example of how to move pieces and communicate with the computer. Try it now!

1. Press the white pawn on square E2. The display shows △ **E2** and the rank/file board lights flash at square E2.
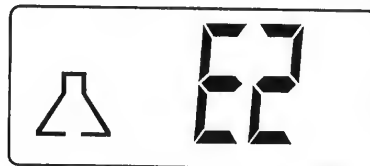
2. Move the pawn to square E4 and press it on the square. The display might show ♟ and a number. The computer records your move and begins to think about its move.


3. The computer might display ▲ and E5 for its TO square (you might get a different response), and the rank/file board lights show the current location of the piece the computer wants to move.

4. Press the black pawn on its current location. The computer displays ▲ and E5 for its TO square (you might get a different response), and the rank/file board lights show the location where the computer wants you to move the piece.

5. Press the black pawn on the location where the computer wants you to move it. The computer displays ♟ _ _ to indicate it is your turn to move.
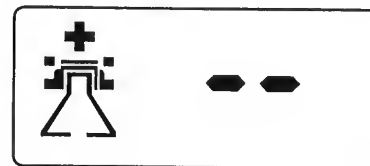
For each move, remember the three basic steps: press, move, and press again.

CORRECTING ACCIDENTAL WRONG MOVES

If you press down on a piece and the FROM square information appears on the display, but you decide not to make that move, press the piece down on the FROM square again. The computer displays ♟ _ _ and you can enter another move.

When you complete a move by pressing the piece down on the TO square, the computer accepts it and immediately considers its next move. If you change your mind after completing a move, wait for the computer to indicate the move it wants to make. Enter the computer's move (see "Entering Moves,") then press **TAKE BACK**. The computer shows you how to take back its last move. After you

take back the computer's last move, press **TAKE BACK** again. The computer shows you how to take back your last move. (See "Taking Back Moves.")

ILLEGAL MOVES

The computer only allows moves that are in compliance with the rules of chess. Illegal moves are not accepted. The computer notifies you of an illegal move or error by beeping an error tone (if the sound is on). The FROM square information on the display and the rank/file board lights also remain unchanged if you make an error.

These things cause the computer to indicate an illegal move:

- Pressing on a piece of the wrong color (e.g., it is white's turn and you press on a black piece).

- Pressing on the wrong square when making the computer's move on the board (e.g., the rank/file board lights show square C5 and you press square B5).

- Pressing on an empty square without having first pressed a piece that can move to that square.

- Moving a piece that puts or leaves your own king in check or checkmate.

- Attempting to castle by moving the rook before the king.

Note: If you move your rook incorrectly when castling and you moved your king

first, the display shows ♔ 00 (on a king side castle) or ♔ 00 0 (on a queen side castle), then the rank/file board lights show the correct square for the rook. Press the rook on the square the computer indicates.

If it is your move and you have already moved the king, press the rook on the FROM square. The computer displays ♔ – –, indicating that you complete the move.

If it is the computer's move, the display and the rank/file board lights show the TO square. Press the piece on the TO square.

FORCING THE COMPUTER'S MOVE

When it is the computer's turn and the display shows a countdown, you can press **PLAY** to force the computer to make an immediate move.

Note: At the mate finder level, pressing **PLAY** will not cause the computer to make a move. Instead, the computer will sound an error beep, and the display will show ♚ – –, indicating that it was interrupted before it could find a checkmate. To continue the game, you must change to another level of play. See "Mate Finder Level (B8)."

CHANGING SIDES WITH THE COMPUTER

To change sides with the computer, press **PLAY** when it is your turn to move. The

computer takes over your pieces and makes a move. Then you can enter moves for the computer's side and continue to play the same game.

WATCHING THE COMPUTER PLAY BOTH SIDES

To watch the computer play against itself, press **PLAY** every time you make the computer's indicated move.

PLAYING BLACK FROM THE BOTTOM OF THE GAME BOARD

Normally the computer plays the black pieces on the top of the game board and you play the white pieces on the bottom. If you want to play the black pieces from the bottom, follow these steps.

1. Place the pieces on the board. Be sure the black pieces are on the side nearest to you.

H G F E D C B A

2. Press **NEW GAME**, then press **PLAY**. The computer indicates the first move for the white pieces.

Note: When you play black from the

bottom, the move notation is automatically reversed on the display for you.

PLAYING AGAINST ANOTHER PERSON

The computer has a non-automatic mode that lets you use it as a referee when you play against another person, enter a series of moves, or replay a game to a certain position.

To use the non-automatic mode, press **NON AUTO**. The computer displays **n-A** for about 2 seconds, then displays ♔ – –.
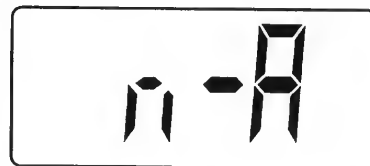
After you press **NON AUTO**, if you want to know what the computer would do in a certain position, press **PLAY**. The computer makes the next move. After it has made the move, the non-automatic mode remains in effect, and you can continue the game.
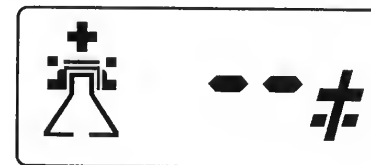
To exit the non-automatic mode, press **NON AUTO**. The computer displays **Aut** for about 2 seconds, then displays either ♔ – – or ♚ – –, depending on which side made the last move before you pressed **NON AUTO**.
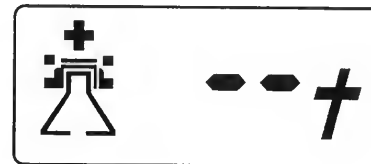
GAME INDICATORS
Checkmate

Whenever a checkmate situation occurs on the board, the computer displays ♔ – – ≠ if the computer wins or ♚ – – ≠ if you win. Press **NEW GAME** to start a new game.
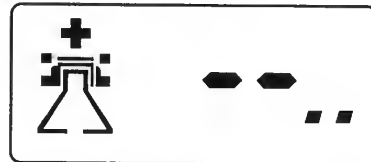
Check

Whenever a check situation occurs on the board, the computer displays ♔ – – + if the computer has your king in check or ♚ – – + if you have the computer's king in check.

Stalemate/Draw Game

Whenever the computer detects that the conditions for a stalemate have occurred, it displays ♔ – – .. if you are stalemated or ♚ – – .. if the computer is stalemated.

If a stalemate occurs, the game is over and cannot be continued. You can, how-

24

25

ever, take back moves (see "Taking Back Moves"), or change position (see "Problem Setup"). Otherwise, press **NEW GAME** to start a new game.

When the computer detects that the conditions for a draw by the 50-move rule have been met, it claims a draw by showing either ♟ **50=..** or ♟ **50=..** on the display.

If the computer is about to make a move to the same location for the third time, or if it recognizes that its opponent has made a move that is a third repetition, it claims a draw by displaying either ♟ **3=..** or ♟ **3=...**

MAKING SPECIAL MOVES

En Passant Capture

The computer recognizes when you choose to move en passant. It also captures a pawn en passant whenever it determines that such a move is desirable. When performing an en passant capture, the computer first indicates the TO square information for its pawn. Then the computer displays the TO square information of the captured pawn with **X**, and the rank/file board lights also show the location of the captured pawn. Press the square and take away the pawn.

Pawn Promotion

When one of your pawns reaches the opposite side of the board, the computer displays ♛. If you choose to promote the pawn to a piece other than a queen, press that piece symbol key to register the promoted piece, then press the TO square.

If one of the computer's pawns reaches the opposite side of the board, the computer promotes its pawn to the piece it determines to be of most value by displaying the symbol for the piece it wants.

Note: You can substitute the promoted piece if one is available, but you don't need to. The computer accepts the pawn with the value it was promoted to. All you need to do is remember which pawn is your or the computer's promoted piece. To make this easier, you can put a piece of tape on top of the promoted piece to mark it.

Castling

The computer recognizes when you choose to castle. Castle by moving your king first.

The computer castles whenever it determines that such a move is desirable. The computer castles by first moving its king and then its rook.

Note: Castling is a king's move. If you attempt to castle by moving your rook first, the computer will view the move as illegal and will not acknowledge it. To correct that mistake, see "Illegal Moves."

For example, follow these steps to perform a white queen's side castle.

1. Press the white king on square E1. The computer displays ♟ **E1**, and the rank/file board lights flash at square E1.

2. Move the white king to square C1 and press it on the square. The computer displays ♟ **000**, and the rank/file board lights indicate square A1.

3. Press the white rook on square A1. The computer displays ♟ **000**, and the rank/file board lights indicate square D1.

4. Move the white rook to square D1 and press it on the square. The computer displays ♟ and countdown digits to indicate it is black's turn to move.

COACH FUNCTION

The computer's coach function helps you to improve your playing skills and understanding of the game by giving you important additional help during a game.

If you select the coach function:

- The computer warns you when you make a move that is not in its opening book (pre-selected list of moves) during the opening moves of a game. If you make such a move, the computer displays **oob**, beeps an error tone, and will not make a countermove. To continue, either press **TAKE BACK** to take back the move and try another move, or press **PLAY** to force the computer to move and continue the game.

  Note: If you press **PLAY** to force a move after the computer displayed **oob**, the computer will no longer verify your moves against its opening book or display **oob** during the game.

- The computer warns you when it can attack one of your pieces with one of its lesser value pieces during a game except at beginner levels (A1 to A8). If you make such a move, the computer indicates the location of the piece with the rank/file board lights and displays the piece symbol and **tHt**. You can either make the move or press **TAKE BACK** to take back the move and try another move.

To use the computer's coach function,

press **COACH LEVEL** until the file board light next to **F** (COACH) lights for about 3 seconds and the display shows **CoA**.

You can use the coach function at any time during a game.

Note: After a certain number of moves at the beginning of a game, the computer indicates the point where its opening book ends by displaying **oob** and beeping several times. To continue, simply make your next move or press **PLAY** to make the computer move.

ADVANCED FUNCTIONS

VERIFYING PIECE POSITIONS

If you want to verify the location of any piece on the chess board, you can use the piece symbol keys to find the position of all pieces. Each time you press a piece symbol key, the computer displays the piece's color and location, and the rank/file board lights indicate the piece's location.

The piece symbol keys look like this.
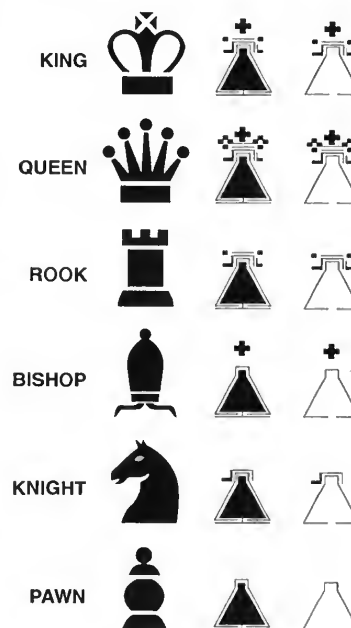
For example, if the white queen is on square D1, and you want to verify its location, press the queen piece symbol key. The computer displays 🛱 **d1**.

If there is more than one of the same-color piece on the board, repeatedly press the piece symbol key. The display and the rank/file board lights show you the location of each same-color piece. If you press the piece symbol key more times than the number of same-color pieces on the chess board, the display shows the piece symbol and **– –**.

You can use the piece symbol keys to verify the location of your pieces during your turn.

To verify the location of the black pieces, press **COLOR**, then press the piece symbol key for the pieces you want to find. Press **COLOR** again to switch back to white.

Press any key to return to normal play.

TAKING BACK MOVES

This function lets you take back any move made by you or the computer after the move has been completed. If you change your mind about a move before pressing the piece down on the TO square, follow the procedures in "Correcting Accidental Wrong Moves."

Note: You can take back moves only during your turn. If you try to take back a move during the computer's turn, the computer will not allow you to take the move back until you have made the move it specifies.

1. Press **TAKE BACK**. Both the rank/file board lights and the display show the TO square of the last move.

2. Press the piece on the indicated TO square. The rank/file board lights show the FROM square of the last move.

3. Move the piece from the TO square to the FROM square.

4. Press the piece on the indicated FROM square.

5. Repeat Steps 1 through 4 to take back additional moves. You can take back up to 3 moves (your move and the computer's move counts as 1 move).

As you take back moves, the computer will not remind you to return a previously captured piece to the board nor a castled rook to its original square. If you are not sure about the position of a previously captured piece or castled rook, see "Verifying Piece Positions."

PROBLEM SETUP

During your turn, you can use the set up mode:

- To erase, re-enter, or relocate pieces any time before or during a game.

- To set up problems or puzzles for the computer to solve.

Press **SETUP** to enter the set up mode.

Before using this mode to create your own positions, familiarize yourself with this procedure by setting up the board positions described in the following examples.

Full Board Setup

In a full board problem set up, the computer records the positions you enter into memory and assumes all other pieces remain in their initial positions. You only need to go through these steps for pieces which you want to remove or move from their initial positions.

Follow these steps to set up a game with most of the chess pieces in their original positions.

1. Press **NEW GAME**.

2. Choose the pieces you want to play with.

3. Press **SET UP**. The computer displays `-- SET UP`.

```
                              SET
                               UP
        ◄►   ◄►
```
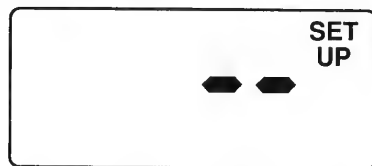
4. Press the piece symbol key for the piece you want to move or remove and **COLOR** to change the color, if necessary. The computer displays the piece symbol for the piece you want to move or remove, and the rank/file board lights indicate the FROM square.

If you want to move or remove more than one of the same pieces, repeatedly press the piece symbol key until the rank/file board lights indicate the FROM square of the correct piece.
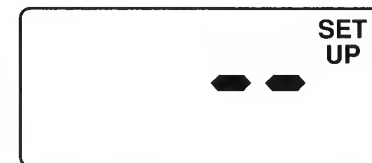
5. Press the piece on the square. The computer displays the piece you want to move or remove, and the rank/file board lights flash to indicate the FROM square.

6. Either remove the piece, or move the piece to the square where you want, then press it on the square. The computer displays the piece symbol and either the square you removed it from or the square you moved it to, and the rank/file board lights indicate the new square.

7. Repeat Steps 5 and 6 for any other pieces you want to move or remove.

8. When you finish setting up the pieces, press **COLOR** until the computer displays a piece symbol for the color whose turn it is, then press **SET UP**. Otherwise, simply press **SET UP**, then choose the level you want and continue the game.

Note: If the computer displays **ILL** after you complete Step 8, it indicates that one or more pieces were moved, removed, or entered illegally. To correct the set up, see "Correcting Illegal Setups."

Partial Board Setup

Follow these steps to clear the chessboard and set up only a few pieces.

1. Press **NEW GAME**.

2. Press **SET UP**. The computer displays `-- SET UP`.

```
                              SET
                               UP
        ◄►   ◄►
```

3. Press **TAKE BACK**. The computer displays **CLr** for about 2 seconds, and clears the positions of all pieces from the board.

4. Press the piece symbol key for the piece you want to add and **COLOR** to change the color, if necessary.

5. Press the piece on the square where you want to put it. The computer displays the piece symbol for the piece you added and its TO square, and the rank/file board lights indicate the TO square.

6. Repeat Steps 4 and 5 for any other pieces you want to set up.

7. When you finish setting up the pieces, press **COLOR** if necessary to choose whose turn it is to make the move, then press **SET UP**. Then choose the level you want and continue the game.

Note: If the computer displays **ILL** after you complete Step 7, it indicates that one or more pieces were set up illegally. To correct the set up, see "Correcting Illegal Setups."

Erasing or Adding Pieces During a Game

Follow these steps to erase or add pieces during a game.

1. Press **SET UP**. The computer displays `-- SET UP`.

2. Press the piece symbol key for the piece you want to erase or add and **COLOR** to change the color, if necessary.

3. Press the square where you want to erase or add the piece, then remove or add the new piece. The computer displays the piece symbol for the piece you erased or added and its FROM square, and the rank/file board lights flash or on to indicate the FROM square.

4. Repeat Step 3 for any other pieces you want to erase or add.

5. When you finish setting up the pieces, press **SET UP**.

Note: If the computer displays **ILL** after you complete Step 5, it indicates that one or more pieces were erased or added illegally. To correct the setup, see "Correcting Illegal Setups."

Correcting Illegal Setups

To be legal, a set up must meet the following conditions. Otherwise, you must correct any illegal entry.

- Each side has one king.

- The king for the side which is not to move is not in check.

- There are no pawns on the first or eighth rank.

If the computer displays **ILL**, it indicates that one or more pieces were set up illegally. To correct the set up:

1. Press the piece symbol key for each piece on the board to verify piece positions. See "Verifying Piece Positions."

2. Set up a piece, or remove the illegal piece, or replace an incorrectly placed piece with the right piece. See "Erasing or Adding Pieces During a Game."

3. Press **SET UP**.

POSITION EVALUATION

The computer can evaluate the current board position. Press **EVALUATION** during the computer's turn. The computer displays ♟ **E nn**. nn is an evaluation rating from –99 to 99.

If the evaluation rating is a positive number, it means that white has an advantage over black. If the evaluation rating is a negative number, it means that black has an advantage over white.

Note: The evaluation rating might change during the computer's move because the computer follows different play lines in its analysis.

When the computer makes its move, it returns to normal display. Press **EVALUATION** again after you have made your move to see the computer's next move and continue the game.

Note: The computer will not display an evaluation rating while set to a mate finder level.

SEARCH DEPTH AND CURRENT MOVE

While the computer is thinking, press **DISPLAY MOVE** to see the search depth and move that it is currently considering. The computer displays the search depth, indicating how far ahead in the game the computer is considering its reaction to a move you might make. For example, **d-2** shows that the computer is considering its move to a depth of 2 half-moves (1 move). The computer also changes the rank/file board lights, showing the moves it is considering.

When the computer makes its next move, it displays the move.

Note: The computer will not display current move information while set to a mate finder level.

Your computer has 8 built-in chess study positions that you can try to solve with its help.

These study positions are intended to entertain you and improve your knowledge of chess. You can select any study position, analyze it carefully, and try to find the correct moves for white. The computer knows the principal lines of attack as analyzed by chess masters, so it can help you to solve the study position.

Note: When using the study positions, the computer automatically sets itself to level H5 (L-n5) and the coach function. For more information about levels, see "Play Levels." For more information about the coach function, see "Coach Function."

Follow these steps to use a study position.

1. Repeatedly press **STUDIES** until you see the study position you want (1 through 8). The computer displays **St n.** n is the study position number (1 through 8). The computer loads the study position you chose into its memory.

2. Set up the board as shown in the diagrams in "About the Study Positions" for the study position you selected.

3. Once you select a study position, start playing by entering the move you think is best for white.

If the move you made is in the computer's solution library, the computer will make a countermove, and play continues. If your move is not in the computer's solution library, the computer beeps and displays **oob**, indicating that your move is out of book, and the computer will not play a countermove. Press **TAKE BACK** to take back the move and try another move. When you play the correct move, the computer will countermove with the best defense for black.

If you cannot find the solution yourself, press **PLAY**. The computer shows you how white should play.

ABOUT THE STUDY POSITIONS

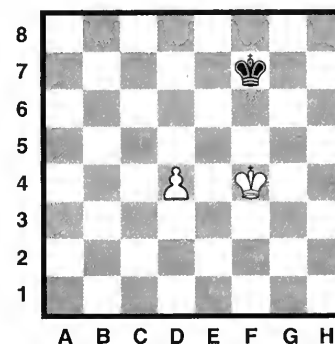### Study Position 1: White to Play and Win

Study Position 1 illustrates how to checkmate an opponent's single king with a limited number of pieces.
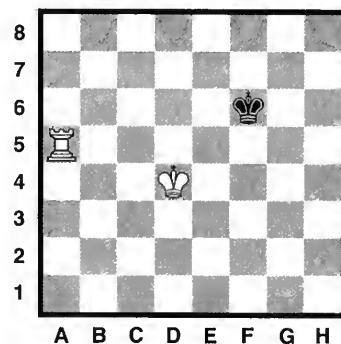

In Study Position 1, the white king and white rook must work together to trap and checkmate the black king. From this position, white can checkmate the black king in 8 moves.

Study Position 2: White to Play and Win

Study Position 2 illustrates the strategy of "gaining the opposition." In order to promote a pawn, the white king must first gain the opposition. Advanced players know that if 2 kings are facing each other on the same rank or file with only 1 empty square between them, then the player waiting to move is said to have the opposition. Gaining the opposition is almost always an advantage in pawn endgames, since it allows a player to gain territory and penetrate the opponent's position.
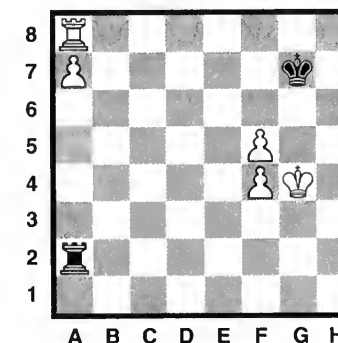

Study Position 3: White to Play and Draw
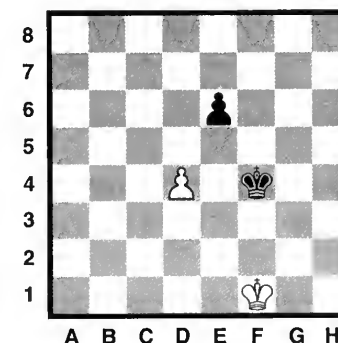
Study Position 3 illustrates the strategy of "drawing." Knowledge of Study Position 2 should help you understand this strategy. White, in grave danger of losing, must play a surprising move to deprive black of the opposition and hold black to a draw.

Study Position 4: White to Play and Win

Study Position 4 illustrates the "skewer" strategy. If the black king moves to the

6th rank, white can check with the rook, promote a pawn, and win very easily. The black king and black rook are forced into a fatal line-up along the 7th rank, after which white uses a deadly skewer to win the black rook. Without knowing this tactic, white could not win the game, despite a 3- pawn advantage.

## Study Position 5: White to Play and Win
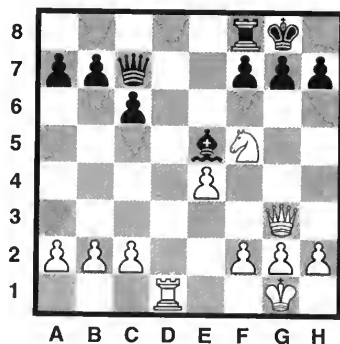
Study Position 5 was taken from the game Capablanca-Tanerow, New York, 1910. The white queen is attacked by Tanerow's black bishop on E5. Capablanca, who was the world chess champion from 1921 to 1927, took just a few brilliant moves to defeat Tanerow. Can you find them?

Study Position 6: White to Play and Win
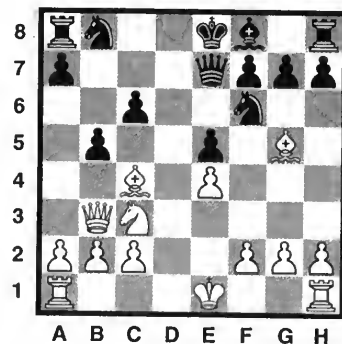
Study Position 6 was taken from a game between the American genius Paul Morphy and the Duke of Brunswick, which was reported to have taken place during an opera! Even after you have found the correct attack, you should play through Study Position 6 more than once, since the computer will try different defenses for black.

Study Position 7: White to Play and Win
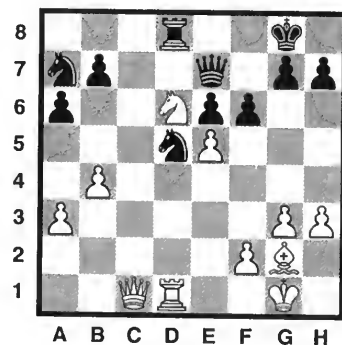
Study Position 7 was taken from the game Alekhine-Grunfeld, Carlsbad, 1923 (with the colors reversed), which "some competent critics have considered the finest ever played," according to chess grandmaster Reuben Fine. Since the computer will try different defenses for black, you should play through Study Position 7 more than once.

Study Position 8: White to Play and Win
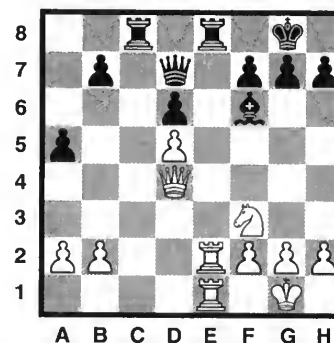
Study Position 8 was taken from the game Edemas-Torre, New Orleans, 1920, and contains a series of astonishing sacrifices of great beauty and originality. White could give a "back-rank mate" if square E8 were not so well protected. Therefore, white attempts to divert the black queen or the black rook on C8 from their defense of this square. If you do not understand the moves the computer plays for black, try playing other moves against the computer. Select Study Position 8, press **PLAY**, make a different black defensive move, then press **PLAY**, again. You will soon realize why black was so cautious!

TROUBLESHOOTING

If your computer is not working as it should, follow the suggestions below to see if you can eliminate the problem. If you cannot, take the computer to your local Tandy/Radio Shack store for assistance.

Symptom	Solution
The LCD display is dim or blank.	• Slide IIIII to the right until the display appears.
The computer does not accept a legal move, or displays an unexpected move.	• Verify the position of all pieces, black and white. See "Verifying Piece Positions."
During a normal game, the display shows **oob** and will not accept white's move.	• The computer is set to the coach function. Press **COACH** until the file board light displays **G** (NORMAL) and the display shows **Con**. See "Turning the Sound On or Off."
During set up, the computer displays **ILL** and will not accept the setup.	• Correct the set up. See "Correcting Illegal Setups."
During a game, the computer will not display evaluation rating or current move information when **EVALUATION** key is pressed.	• The computer is set to the mate finder level, and cannot display an evaluation rating during a mate search game. Choose another button or level.
During a normal game, the computer will not beep.	• The computer is set to silent. Press **COACH** until the file board light displays **G** (NORMAL) and the display shows **Con**. See "Turning the Sound On or Off."
The computer does not work at all.	• Check the batteries and AC adapter (if used).

MAINTENANCE

Your GO Partner 1680X Chess Computer is an example of superior design and craftsmanship. The following suggestions will help you care for your computer so you can enjoy it for years.

Keep the computer dry. If it gets wet, wipe it dry immediately. Liquids contain minerals that can corrode the electronic circuits.

Use and store the computer only in normal temperature environments. Temperature extremes can shorten the life of electronic devices, damage batteries, and distort or melt plastic parts.

Handle the computer gently and carefully. Dropping it can damage circuit boards and cases, and can cause the computer to work improperly.

Keep the computer away from dust and dirt, which can cause premature wear of parts.

Wipe the computer with a damp cloth occasionally to keep it looking new. Do not use harsh chemicals, cleaning solvents, or strong detergents to clean it.

Modifying or tampering with the computer's internal components can cause a malfunction and might invalidate its warranty. If your computer is not performing as it should, take it to your local Radio Shack store for assistance.